THE MARYLAND STATE COLLEGE OF AGRICULTURE

FARM ADVISER

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NOTICE

The purpose of the Farm Adviser s to furnish a convenient and timely medium for supplying news notes regarding the work of the Agricultural College, Experiment Station, and Extension Service, in co-operation with the U. S. Department of Agriculture to the local press and to county demonstration agents with a view to keeping them and the people throughout the State informed of the activities of these agricultural agencies in their behalf. All requests for copies of this sheet should be directed to Reuben Brigham, In Charge of Publications, The Extension Service, College Park, Maryland.

Plow In Wheat Stubble for Hessian Fly

College Park, Md., Aug. 21.

Farmers must remember that the spring brood of the Hessian fly spends its pupa or "flax seed" stage in wheat stubble during the summer. According to Director T. B. Symons, of the Maryland Agricultural Extension Service, "it is very desirable, where possible, to plow under all stubble fields early, preferably before August 15th, also to destroy all volunteer wheat. This will prevent the emergence of the adult flies in September. It is not good farm practice to follow wheat a second year in the same field, although it is often done.

"Then it is common in this State that wheat stubble is seeded to timothy and clover, and, therefore, any kind of cultivation of these stubble fields is impractical. Under these conditions, the farmer can only delay seeding his stubble in the fall until the flies have made their way from the stubble to the fields and died without being able to find young wheat on which to lay their eggs."

Suggestions In Filling the Silo

College Park, Md., Aug. 21.

In filling his silo, the farmer must use the proper precautions if his silage is to be of good quality and be preserved at a minimum loss of food material. In reply to inquiries received by the Maryland Agricultural Extension Service, G. E. Wolcott, in charge of Dairy Extension, advises that field corn should be cut for silage when the lower leaves begin to dry out and a glaze begins to form. He says, "at this stage, the husk will also begin to turn yellow. The knives on the cutter should be kept sharp and the corn should be cut so that the pieces will be about one-half inch long. By cutting in small lengths, the silage will pack better and a greater quantity can be placed in the silo. It is also very important that the silage be well packed. Two or three men should be kept in the silo. By packing well, the air will be forced out and considerabls silage, which would otherwise be lost, will be saved. If the corn is too drv to pack well, water should be added. If it is found necessary to add water it should be run in as the silo is filled.

Sweet corn should be allowed to stand a little longer than field corn in order to make a good quality of silage.

While the silo is being filled, it is well to start the blower before any one enters the silo. If all the doors are in place the heavy gases which are formed cannot escape and accidents may be prevented by taking precautions to blow out any gas that may be present.

When the filling is finished, it would be a good plan to cover the silage with straw, then pour water on the straw so that it will pack. This will prevent the loss of silage at the top. As the silage settles, it should be packed each day."

Using The Hydraulic Ram on The Farm

College Park, Md., Aug. 21.

The use of the hydraulic ram in supplying water to the farm home and outbuildings is discussed in an article by Harry Gwinner, of the Maryland State College of Agriculture, written in response to inquiries for information on the subject.

Prof. Gwinner calls especial attention to the advantages of the ram, which are its simplicity, moderate first cost and freedom from attention. He says, "The hydraulic ram is a device by which a volume of water, having a fall or 'head' may be used to force a quantity of water to a higher level than the height of the 'head' or fall. A portion of the water water which produces the power is the same water that is raised.

"Advantages of the Ram

"The chief advantages of the ram are its simplicity, moderate first cost and freedom from attention. The principle of the ram is that of using the inertia or momentum of a moving quantity of water to produce a back and forth motion in the column of water, the motion being sufficient to open and close the outlet value

and to force a portion of the water through the valve each time it opens, and also through the check valve to the desired location.

"The ram consists of a body which forms the support for the air chamber, a check or inlet valve leading into the air chamber, an impetus or outlet valve, a snifter or air valve and connections for the supply or drive pipe and the delivery pipe.

"When the water is admitted from the reservoir to the drive pipe, it will attain sufficient velocity in flowing through the body and outlet valve at the end of the body to close the valve sharply against its seat. This sudden closing causes the flow of water to react and a momentary increase of pressure occurs in the body and the water having no other outlet, passes into the air chamber through the check or inlet valve, which is situated in the bottom of it where it joins the body of the ram. The repetition of this process a few times compresses the air in the air chamber, forming a cushion which increases the pressure against the water in the air chamber, forcing it through the delivery pipe attached to the air chamber.

"When the recoil or reaction takes place in the supply or drive pipe, the pressure is lowered and the waste valve drops back into its original or open position. Then the flow starts again through the drive pipe, passing out through the waste valve until the velocity is sufficient to close this valve, as already mentioned, and opening the check valve again.

"The object of the check or snifting valve is for the purpose of allowing air to pass into the air chamber; otherwise, the chamber would fill with water and no action would occur.

"Cost of Ram

"A ram having a drive pipe of three-quarters of an inch in diameter and discharge pipe of one-half an inch in diameter with an operating supply of from two to three gallons per minute and a three-foot 'head' of fall will deliver from ten to fifteen gallons per hour to a height of twenty feet above the ram; or, if the head of fall is ten feet, the water will be elevated to a height of eighty feet. This ram will cost about $9.00 exclusive of the piping.

"A ram having a four-inch drive pipe and a two-inch delivery pipe with an operating supply of from thirty to sixty gallons per minute, with a three-foot head of fall, will deliver from one hundred and fifty to three hundred gallons per hour to a height of twenty feet above the ram, or with a ten-foot head of fall, will deliver the same quantity of water to an elevation of eighty feet above the ram. This ram costs about $130.00.

"The Mechanical Engineering Department of the Division of Engineering of the Maryland State College, College Park, Md., will furnish any other desired information."

State Horticultural Society Holds Summer Meeting

College Park, Md., Aug. 21.

The summer meeting of the Maryland State Horticultural Society will be held at Hancock, Md., August 29th and 30th, 1916. Special interest centers in this meeting, as the members and guests of the society will have an opportunity to visit one of the most picturesque sections of Maryland. The citizens and fruit growers of Hancock and vicinity have extended a cordial invitation to the members of the society and their friends to attend this meeting.

Hancock will celebrate "Home Coming Week" during this period and great preparations are being made for the reception of visitors. A special auto trip is arranged for Wednesday, August 30th, when all members and their friends will be conducted through the large peach and apple orchards of that section. More than 300,000 fruit trees are grown in this immediate section. All visitors will be guests of the citizens at dinner in Hancock on the 30th.

The primary object of the society in holding a summer meeting is to permit the members to observe practical operations in horticultural work in different parts of the State. It should prove an opportunity to visit a beautiful section of Maryland and observe how the famed Western Maryland fruit is produced. Plan to take in this interesting trip.

HANCOCK

August 29th and 30th, 1916.

PROGRAM

Tuesday, August 29th—8.00 p. m.
Call to Order - - I. H. Moss, President Horticultural Society.
Address of Welcome - Hon. T. P. Gilleese, Mayor of Hancock.
Response - Hon. Orlando Harrison, Berlin, Maryland.
"Apple Grading and Packing," C. T. Moore, Office of Markets, U. S. D. A.
Remarks - S. L. Lupton, Winchester, Virginia.

Wednesday, August 30th,
9.00 a. m. to 12.30 p. m.
Automobile trip through 3,000 acres of apple and peach orchards near Hancock, conducted by fruit growers and citizens.

1.00 p. m.—Luncheon at Hancock as guests of Citizens.

Afternoon Meeting—2.00 p. m.
Call to Order - President I. H. Moss, Baltimore, Md.
"The Fruit Outlook," M. G. Kains, Horticulturist, Penn. State College.
"Rural Organization," C. S. Richardson, Maryland State College.
"The Home State Tour," Henry Edward Warner, Baltimore, Md.
"The 1916 Exhibition and Meeting" T. B. Symons, College Park, Md.

An apple demonstration will be conducted on Wednesday morning by Mr. S. B. Shaw, for the benefit of all those interested in grading and packing under the new law.

The Baltimore and Ohio Railroad has granted special rates from Baltimore, leaving Tuesday, August 29, and returning August 31st. Full particulars regarding the schedule arrangements may be secured from Secretary T. B. Symons, College Park, Maryland. All persons desiring hotel accommodations should also advise him in advance, so that reservations can be made.